IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) An apparatus for detecting the ~~movement~~ position of an invasive instrument in relation to ~~of~~ internal organs ~~(9)~~ of the body, comprising:

a) a source of a location signal indicating the location of the invasive instrument;

~~a~~b) an X-ray device ~~(1, 5)~~ and/or an ultrasound device ~~(8)~~ for producing an image of at least one clearly defined body structure ~~(10)~~; and

b) a data processing device ~~(6)~~ which is coupled to the X-ray device ~~(1, 5)~~ or ultrasound device ~~(8)~~ and responsive to the location signal and is designed to determine the position (x_z) of the clearly defined body structure ~~(10)~~ in the image and to generate a movement parameter there from.

2. (currently amended) An apparatus as claimed in claim 1, characterized in that the clearly defined body structure is a part of the diaphragm ~~(10)~~.

3. (currently amended) An apparatus as claimed in claim 1, characterized in that it comprises an X-ray device ~~(1, 5)~~ and is designed to produce an image of the body structure with a minimum size of the irradiation field ~~(3)~~ and/or with a minimum dose of radiation.

4. (currently amended) An apparatus as claimed in claim 1, characterized in that it comprises an ultrasound device ~~(8)~~ which is designed to produce at least one sectional image that contains the clearly defined body structure ~~(10)~~.

5. (currently amended) An apparatus as claimed in claim 1, characterized in that it comprises an ultrasound device ~~(8)~~ which has means for fixing it to the body of a patient ~~(4)~~, and in that ~~it~~ the location signal source comprises a locating device for determining the spatial position of the ultrasound device ~~(8)~~, said locating device being coupled to the data processing device ~~(6)~~.

6. (original) An apparatus as claimed in claim 1, characterized in that it is designed to produce images of alternating clearly defined body structures.

7. (currently amended) An apparatus as claimed in claim 1, characterized in that the data processing device ~~(6)~~ is designed to calculate a quality measure for the movement parameter.

8. (currently amended) An apparatus as claimed in claim 1, characterized in that the data processing device ~~(6)~~ is designed to calculate the position of an internal organ ~~(9)~~ of the body with the aid of a model that is dependent on the movement parameter.

9. (currently amended) A navigation system for navigating a catheter in a vascular system, comprising

a) a locating device for determining the spatial position of the catheter;

b) an apparatus as claimed in ~~at least one of~~ claims 1 ~~to 8~~ for determining a movement parameter; and

c) a data processing device which is coupled to the locating device and to the apparatus and is designed to determine the position of the catheter relative to the vascular system.

10. (currently amended) A method of recording the movement of internal organs ~~(9)~~ of the body, comprising the steps

a) producing an image of at least one clearly defined body structure ~~(10)~~ by means of X-ray radiation and/or ultrasound;

b) identifying the location of an invasive device in the body;

~~b~~c) determining the position (x_z) of the clearly defined body structure ~~(10)~~ in the image in relation to the invasive device and generating a movement parameter.